Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	25740	(front adj side) same (back adj side)	US-PGPUB; USPAT	OR	ON	2006/01/16 09:24
L2	215	(front adj side) same (back adj side) same defects	US-PGPUB; USPAT	OR	ON	2006/01/16 10:50
L3	177	2 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 10:44
L4	50	(front adj side) same (back adj side) same defects	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/16 10:37
L5	73	(top adj side) same (bottom adj side) same defects	US-PGPUB; USPAT	OR	ON	2006/01/16 10:48
L6	47	5 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 10:51
L7	46	6 not 3	US-PGPUB; USPAT	OR	ON	2006/01/16 10:40
L8	46	(front adj side) same (back adj side) same (flaw or imperfection)	US-PGPUB; USPAT	OR	ON	2006/01/16 10:47
L9	45	8 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 10:44
L10	42	9 not 3	US-PGPUB; USPAT	OR	ON	2006/01/16 10:44
L11	42	10 not 7	US-PGPUB; USPAT	OR	ON	2006/01/16 10:44
L12	12	(front adj side) same (back adj side) same (flaw or imperfection)	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/16 10:47
L13	49	(top adj side) same (bottom adj side) same defects	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/16 10:48
L14	76	((front adj side) and (back adj side) and defects).clm.	US-PGPUB; USPAT	OR	ON	2006/01/16 10:57
L15	65	14 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 10:58
L16	65	15 not 7	US-PGPUB; USPAT	OR	ON	2006/01/16 10:51
L17	11	15 not 3	US-PGPUB; USPAT	OR	ON	2006/01/16 10:51
L18	3	((front adj side) and (back adj side) and (flaw or imperfection)).clm.	US-PGPUB; USPAT	OR	ON	2006/01/16 11:29
L19	2	18 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 10:59

L20	1	((top adj side) and (bottom adj side) and (flaw or imperfection)).clm.	US-PGPUB; USPAT	OR	ON	2006/01/16 10:58
L21	8	((top adj side) and (bottom adj side) and defects).clm.	US-PGPUB; USPAT	OR	ON	2006/01/16 10:59
L22	5	21 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 11:11
L23	4841	438/5,14,692,800.ccls.	US-PGPUB; USPAT	OR	ON	2006/01/16 11:13
L24	3699	23 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 11:13
L25	139	24 and ((top or front) adj side) and ((back or bottom) adj side)	US-PGPUB; USPAT	OR	ON	2006/01/16 11:15
L26	984	702/35,155,33,40.ccls.	US-PGPUB; USPAT	OR	ON	2006/01/16 11:13
L27	754	26 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 11:30
L28	14	27 and ((top or front) adj side) and ((back or bottom) adj side)	US-PGPUB; USPAT	OR	ON	2006/01/16 11:13
L29	139	24 and ((top or front) adj side) and ((back or bottom) adj side)	US-PGPUB; USPAT	OR	ON	2006/01/16 11:15
L30	42	((front adj side) and (back adj side) and (contaminants)).clm.	US-PGPUB; USPAT	OR	ON	2006/01/16 11:33
L31	28	30 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 11:33
L32	30	((top adj side) and (bottom adj side) and (contaminants)).clm.	US-PGPUB; USPAT	OR	ON	2006/01/16 11:33
L33	23	32 and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 11:34
L34	14	((kurt with haller) or (susan with lopez)) and @ad<"20021004"	US-PGPUB; USPAT	OR	ON	2006/01/16 11:35
L35	7	((kurt with haller) or (susan with lopez))	USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/01/16 11:35

US-PAT-NO: 6156580

DOCUMENT-IDENTIFIER: US 6156580 A
See image for Certificate of Correction

TITLE: Semiconductor wafer analysis system and method

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Brief Summary Text - BSTX (9):

In another method, a **front side** of a wafer is laser scanned. The **front side** inspection data is transmitted to a control computer, and the wafer is thereafter inverted, whereby a **back side** of the wafer is exposed for laser scanning. The **back side** of the wafer is laser scanned and **back side** inspection data is transmitted to a control computer. The wafer is inverted after laser scanning the **back side** and then moved to a microscope review station. The **front side** inspection data is downloaded to the microscope review station, and the wafer is positioned under the microscope at the **defect** positions indicated by the **front side** inspection data. The wafer is inverted, whereby a **back side** of the wafer is exposed for review, and the **back side** inspection data is downloaded to the microscope review station. The wafer is positioned under the microscope at the **defect** positions indicated by the **back side** inspection data.

Brief Summary Text - BSTX (10):

In yet another method for analysis of semiconductor wafers, a cassette containing a plurality of wafers is moved to a first inspection station that laser scans the **front side**. The **front sides** of the wafers are laser scanned and **front side** inspection data is transmitted to a control computer. The wafers are inverted, whereby **back sides** of the wafers are exposed for laser scanning, and the **back sides** of the wafers are laser scanned. The **back side** inspection data is transmitted to a control computer, and the wafers are inverted after laser scanning the **back sides** and replaced in the cassette. The cassette of wafers is moved to a microscope review station, and the **front side** inspection data is downloaded to the microscope review station. The wafers are positioned under the microscope at the **defect** positions indicated by the **front side** inspection data. The wafers are inverted, whereby **back sides** of the wafer are exposed for review, and the **back side** inspection data is downloaded to the microscope review station. The wafers are positioned under the microscope at the **defect** positions indicated by the **back side** inspection data.

Detailed Description Text - DETX (9):

For wafers that are acceptable after having reviewed the **front sides,** visual inspection of the **back sides** of the wafers is desirable to review the **back side defects**. The cassette of wafers is moved to the second microscope review station 110. Each wafer selected for visual review and prior to being staged under the microscope of station 110, is flipped by wafer inverter 116 in order to expose the **back side** of the wafer to the microscope. The **back side** inspection data is transmitted from the control system 102 to the review station 110, and the review station positions each wafer under the microscope in response to the **back side** inspection data.

Detailed Description Text - DETX (19):

When all the wafers have had their **back sides** laser scanned, step 422 directs control to step 426 of FIG. 4B where wafers are selected for visual review. The selection may be made based on the reflected image of a laser scanned wafer possessing certain characteristics indicative of **defects**. The selected wafers are moved to a **front side** microscope review station at step 428, and at step 430 the selected wafers are reviewed. **Front side** inspection data is transmitted from the control system to the **front side** review station for the purpose of positioning the wafers under the microscope to view the **defects**.

Detailed Description Text - DETX (21):

The first selected wafer is removed from the cassette at step 434, and at step 436 the wafer is flipped to expose the **back side** for review with a microscope. The wafer is then moved to the microscope stage, and using the **back side** inspection data transmitted from the control system, the wafer is positioned under the microscope to provide a view of a selected **defect,** as shown by step 438. After the **back side** of the wafer is reviewed at step 440, the wafer is again flipped to return it to having its **front side** exposed at step 442. The wafer is then replaced in the cassette at step 444, and steps 446 and 448 continue the process of **back side** review until all the selected wafers have been processed.